

Amendments to the Claims

1. (Currently Amended) A computer-implemented method for testing a computer sound card having a wave table synthesizer and a memory storing a sample of a pre-produced digital tone at a known frequency, the method comprising executing a diagnostic application program on a computer containing the computer sound card, the diagnostic application program, when executed by the computer, configured to:

utilize the wave table synthesizer of the computer sound card to play the pre-produced digital tone from the sample stored in the memory of the computer sound card;

convert the pre-produced digital tone to an analog format tone;

pass the analog format tone to a mixer of the computer sound card;

after the analog format tone is received at the mixer, loop the analog format tone through an internal loopback mechanism of the computer sound card to a recording audio channel of the computer sound card;

convert the analog format tone to a second digital format tone;

record the second digital format tone;

convert the recorded second digital format tone from a time domain to a frequency domain;

compare the second digital format tone to the pre-produced digital tone;

if the second digital format tone is substantially similar to the pre-produced digital tone, designate the audio sound card as passing an audio test;

~~calculating calculate~~ a DC offset value for the second digital format tone;

~~comparing compare~~ the calculated DC offset value to a known acceptable DC offset value to determine whether an unacceptable level of DC offset is produced when the pre-produced digital tone is converted to the analog format tone and is looped through the internal loopback mechanism to the recording audio channel; and

if the calculated DC offset value is unacceptable, designate the recording audio channel as failing the audio test.

2. (Previously Presented) The computer-implemented method of Claim 1, wherein if the second digital format tone is substantially similar to the first digital format tone, designating the recording audio channel of the audio sound card as passing an audio test.

3-8. (Cancelled)

9. (Previously Presented) The computer-implemented method of Claim 1, wherein converting the second digital format tone from a time domain to a frequency domain comprises converting the second digital format tone from a time domain to a frequency domain via a Fast Fourier Transformation (FFT).

10. (Previously Presented) The computer-implemented method of Claim 1, further comprising comparing a frequency of the second digital format tone with a known frequency of the pre-produced digital tone.

11. (Previously Presented) The computer-implemented method of Claim 10, wherein the second digital format tone is substantially similar to the pre-produced digital tone if the frequency of the second digital format tone is substantially the same as the known frequency of the pre-produced digital tone.

12. (Previously Presented) The computer-implemented method of Claim 1, further comprising comparing a volume intensity of the second digital format tone with a known volume intensity of the pre-produced digital tone.

13. (Previously Presented) The computer-implemented method of Claim 12, wherein the second digital format tone is substantially similar to the pre-produced digital tone if the volume intensity of the second digital format tone is substantially the same as the known volume intensity of the pre-produced digital tone.

14-20. (Cancelled)

21. (Currently Amended) A system for testing a computer sound card in a computer, the system comprising:

 a computer sound card comprising a mixer, a recording channel, a wave table synthesizer, and a memory storing a sample of a pre-produced digital tone at a known frequency;

 a processor; and

 a system memory operatively coupled to the processor and containing computer-readable instructions that, when executed by the processor, cause the processor to

 utilize the wave table synthesizer to play the pre-produced digital tone from the sample,

 convert the pre-produced digital tone to an analog format tone,

 pass the analog format tone to the mixer,

 loop the analog format tone through an internal loopback mechanism of the mixer to the recording channel,

 convert the analog format tone to a second digital format tone,

 convert the second digital format tone from a time domain to a frequency domain via a fast Fourier transformation,

 determine whether a frequency of the second digital format tone is substantially the same as the known frequency of the pre-produced digital tone,

 upon determining that the frequency of the second digital format tone is substantially the same as the known frequency, calculate a DC offset value for the second digital format tone[[;]]₂,

 determine whether the calculated DC offset value is acceptable based on a threshold DC offset value[[;]]₂,

 upon determining that the calculated DC offset value is not acceptable, designate the computer sound card as failing [[the]] an audio test[[;]]₂ and

 upon determining that the calculated DC offset value is acceptable, designate the computer sound card as passing [[an]] the audio test.

22. (Canceled)

23. (Currently Amended) A computer-readable storage medium, containing computer-executable instructions that, when executed by a computer, cause the computer to:

utilize a wave table synthesizer of a computer sound card ~~comprising~~ to play a pre-produced digital tone at a known frequency from a sample stored in a memory of the computer sound card;

convert the pre-produced digital tone to an analog format tone;

pass the analog format tone to a mixer of the computer sound card;

loop the analog format tone through an internal loopback mechanism to a recording channel of the computer sound card;

convert the analog format tone to a second digital format tone;

convert the second digital format tone from a time domain to a frequency domain via a fast Fourier transformation;

determine whether a frequency of the second digital format tone is substantially the same as the known frequency of the pre-produced digital tone;

upon determining that the frequency of the second digital format tone is substantially the same as the known frequency, calculate a DC offset value for the second digital format tone;

determine whether the calculated DC offset value is acceptable based on a threshold DC offset value;

upon determining that the calculated DC offset value is not acceptable, designate the computer sound card as failing [[the]] an audio test; and

upon determining that the calculated DC offset value is acceptable, designate the computer sound card as passing [[an]] the audio test.